

CAENOLESTIDAE TROUESSART, 1898, AND
 PALAEOTHENTIDAE SINCLAIR, 1906 (MAMMALIA);
 PROPOSED CONSERVATION UNDER THE PLENARY
 POWERS. Z.N.(S.) 2214

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The object of this application is to safeguard the family-names CAENOLESTIDAE Trouessart, 1898, and PALAEOTHENTIDAE Sinclair, 1906, from the threat to their stability represented by the prior names ABDERITIDAE Ameghino, 1889, EPANORTHIDAE Ameghino, 1889, GARZONIDAE Ameghino, 1891, and DECASTIDAE Ameghino, 1893. Continuity and universality in the nomenclature of an important group of South American mammals are at stake.

2. The family-group names involved, with the type-genus of each nominal taxon and the type-species of each nominal genus, are tabulated on pp. 59–60. Notes on each case follow the table.

3. The usage of family-group names in this group has developed as follows. Ameghino (1903: 159) recognized three families among early Miocene (Santacrucian) representatives of his group Diprotodonta: the ABDERITIDAE, EPANORTHIDAE and GARZONIDAE. Trouessart (1898: 1200, 1202, 1204, 1205; 1904: 839, 840, 843, 844) recognized four families, the ABDERITIDAE, EPANORTHIDAE, GARZONIDAE and CAENOLESTIDAE. Palmer (1904: 876, 881, 882) recognized three families: the ABDERITIDAE, EPANORTHIDAE (including CAENOLESTIDAE and DECASTIDAE) and GARZONIDAE. Sinclair (1906: 416) opted to group "... all the Santa Cruz diprotodont marsupials in a single family, which may be called the CAENOLESTIDAE (Trouessart, 1898, p. 1205) from its only surviving and best known representative *Caenolestes*." within this family Sinclair recognized three subfamilies: the CAENOLESTINAE (with *Caenolestes*, *Halmarhiphus*, *Garzonia*), the PALAEOTHENTINAE (with *Palaeothentes*, *Callomenus*, *Decastis*) and the ABDERITINAE (with *Abderites*).

4. Sinclair's classification has been the one most commonly (though not exclusively) used for the last seventy years. The example of Thomas (1895: 875) in placing *Caenolestes* in the EPANORTHIDAE was followed by Osborn (1910: 517). Osborn

TABLE

Family-group name	Name of type-genus of nominal family-group taxon	Name of type-species of nominal type-genus, and how fixed
ABDERITIDAE Ameghino, 1889: 268, 269 (as "Abderitesidae") (1)	<i>Abderites</i> Ameghino, 1887: 5	<i>Abderites meridionalis</i> Ameghino, 1887: 5, by original designation
EPANORTHIDAE Ameghino, 1889: 268, 270 (2)	<i>Epanorthus</i> Ameghino, 1889: 27 (replacement name for <i>Palaeothentes</i> Ameghino, 1887: 5)	<i>Palaeothentes aratae</i> Ameghino, 1887: 5, through <i>Palaeothentes</i> Ameghino, 1887: 5
GARZONIDAE Ameghino, 1891: 304, 307(3)	<i>Garzonia</i> Ameghino, 1891: 21 (subjective junior synonym of <i>Stilotherium</i> Ameghino, 1887: 7)	<i>Garzonia typica</i> Ameghino, 1891: 307, under Article 68b
DECASTIDAE Ameghino, 1893: 79(4)	<i>Decastis</i> Ameghino, 1891: 19 (subjective junior synonym of <i>Dipilus</i> Ameghino, 1890)	<i>Decastis columnaris</i> Ameghino, 1891: 305 by original designation
CAENOLESTIDAE Trouessart, 1898: 1205(5)	<i>Caenolestes</i> Thomas, 1895: 875 (replacement name for <i>Hyracodon</i> Tomes, 1863, <i>non</i> Leidy, 1856)	<i>Hyracodon fuliginosus</i> Tomes, 1863, through <i>Hyracodon</i> Tomes, 1863, of which it is the type-species by monotypy
PALAEOTHENTIDAE Sinclair, 1906: 417(6)	<i>Palaeothentes</i> Ameghino, 1887: 5	<i>Palaeothentes aratae</i> Ameghino, 1887: 5, by subsequent designation by Clemens & Marshall, 1976: 72

NOTES

(1) ABDERITIDAE is a justified emendation under Article 33a(i) by Ameghino (1903: 159) of "Abderitesidae" Ameghino (1889: 268, 269). Since the work of Sinclair (1906: 417) it has been treated as a sub-family of CAENOLESTIDAE Trouessart (1898: 1205).

(2) EPANORTHIDAE was erected by Ameghino (1889: 272) to include the genera *Epanorthus* and *Acestis*. However, EPANORTHIDAE Ameghino, 1889, is invalid because it is based on *Epanorthus*, an invalid replacement name. The sequence of events was as follows: The name "*Palaeothenes aratae* Mor." was published in 1882 by Doering (: 455) in a list of names and is a *nomen nudum*. The name *Palaeotenthes aratae* was published, also in 1882, by Moreno (: 116), but this too is a *nomen nudum*. It is impossible to establish which name appeared first, but this has no importance.

In 1887 (: 5) Ameghino described *Palaeothenes aratae* for the first time and the name is to be attributed to him. However, he clearly knew of the earlier publications, because in 1889 (: 271) he decided that this spelling was "impossible" and that the generic name should have been written *Palaeoteuthis* and hence was preoccupied by *Palaeoteuthis* d'Orbigny, 1850, an extinct dibranchiate cephalopod. He therefore proposed *Epanorthus* to replace it. However, the spelling *Palaeothenes* was original and intentional, and is *ipso facto* the correct spelling regardless of its etymology. It cannot be preoccupied by the quite different name *Palaeoteuthis* (see Simpson, 1945: 45n). Indeed, Sinclair (1906: 416) had already argued that *Epanorthus* "can no longer be retained either for a genus or to designate a family [EPANORTHIDAE]."

Palaeothenes, when described in 1887 (and redescribed in 1889 when *Epanorthus* was proposed to replace it) contained six species and no type-species was designated on either occasion. So far as we know, Clemens & Marshall (1976: 72) were the first to designate a type-species for this genus when they designated *P. aratae*, the first species described.

EPANORTHIDAE was last used as a valid senior synonym by Scott (1937: 717).

(3) GARZONIDAE was proposed by Ameghino (1891: 304, 307) to include the genera *Garzonia* and *Halmarhiphus*. *Garzonia* is now considered a junior synonym of *Stilotherium* Ameghino, 1887: 7 (see Reig, 1955: 62). Sinclair (1906: 417) included the GARZONIDAE within the CAENOLESTINAE and the name has remained unused as a senior synonym for the last seventy years. The last use of the family-name GARZONIDAE as a valid name was by Ameghino (1906: 417).

(4) DECASTIDAE was proposed by Ameghino (1893: 79) to include the genera *Decastis*, *Acestis* and *Dipilus*. *Decastis* Ameghino, 1891 is recognized as a junior synonym of *Dipilus* Ameghino, 1890 (see Simpson, 1945: 45; Clemens and Marshall, 1976: 70). Sinclair (1906: 417) included the DECASTIDAE in the PALAEOTHENTINAE and the name has remained unused as a senior synonym for the last seventy years.

(5) CAENOLESTIDAE was proposed by Trouessart (1898: 1205) for *Caenolestes* only.

(6) PALAEOTHENTINAE was proposed by Sinclair (1906: 417) to include *Palaeothenes*, *Callomenus* Ameghino, 1891, and *Decastis*. It was raised to the rank of family by Osgood (1921: 143, 151), but has remained unused as a senior synonym since that time.

recognized a superfamily CAENOLESTOIDEA, but no family CAENOLESTIDAE. Osgood (1921: 151) placed *Caenolestes* in the CAENOLESTINAE, family PALAEOTHENTIDAE. Winge (1923: 84) recognized one family, EPANORTHIDAE, and included within it (among other groups) the CAENOLESTINI (with *Halmatorhiphus*, *Caenolestes*, *Garzonia*) and EPANORTHINI (with *Epanorthus*, *Callomenus*, *Decastis*, *Abderites*). More recently, Scott (1937: 717, 722) recognized one family, EPANORTHIDAE, with three subfamilies: CAENOLESTINAE, EPANORTHINAE and ABDERITINAE.

5. The family-group names ABDERITIDAE and GARZONIDAE have remained unused as valid names for the last seventy years. Pertinent publications in which Sinclair's classification and nomenclature have been followed include: Clemens & Marshall (1976: 10), Marshall (1976: 83), Pascual & Herrera (1973: 44), Piveteau (1961: 619), Simpson (1930: 9; 1945: 44; 1970: 58), Zittel (1925: 27) and many others.

6. If the Law of Priority is strictly applied, the family-group names CAENOLESTIDAE and CAENOLESTINAE of the classification most commonly used for the last seventy years would have to be replaced by ABDERITIDAE and GARZONINAE. This would not only upset stability in nomenclature but also introduce taxonomic concepts that are quite unacceptable.

7. We therefore ask the Commission:

(1) to use its plenary powers to rule that the family-group names ABDERITIDAE Ameghino, 1889, GARZONIDAE Ameghino, 1891, and DECASTIDAE Ameghino, 1893, are not to be given nomenclatural precedence over the family-group names CAENOLESTIDAE Trouessart, 1898 and PALAEOTHENTINAE Sinclair, 1906;

(2) to place the following family-group names on the Official List of Family-Group Names in Zoology with the endorsements shown:

(a) CAENOLESTIDAE Trouessart, 1898 (type-genus *Caenolestes* Thomas, 1895), to be given nomenclatural precedence over ABDERITIDAE Ameghino, 1889, GARZONIDAE Ameghino, 1891, and DECASTIDAE Ameghino, 1893;

(b) PALAEOTHENTINAE Sinclair, 1906 (type-genus *Palaeothentes* Ameghino, 1887), to be given nomenclatural precedence over ABDERITIDAE Ameghino, 1889, GARZONIDAE Ameghino, 1891, and DECASTIDAE Ameghino, 1893;

(c) ABDERITINAE Ameghino, 1889 (type-genus *Abderites* Ameghino, 1887), not to be given nomenclatural precedence over CAENOLESTIDAE Trouessart, 1898 or PALAEOTHENTINAE Sinclair, 1906;

(d) GARZONIDAE Ameghino, 1891 (type-genus *Garzonía* Ameghino, 1891), not to be given nomenclatural precedence over CAENOLESTIDAE Trouessart, 1898 or PALAEOTHENTINAE Sinclair, 1906;

(e) DECASTIDAE Ameghino, 1893 (type-genus *Decastis* Ameghino, 1891), not to be given nomenclatural precedence over CAENOLESTIDAE Trouessart, 1898 or PALAEOTHENTINAE Sinclair, 1906;

(3) to place the following generic names on the Official List of Generic Names in Zoology:

(a) *Caenolestes* Thomas, 1895 (gender, masculine), type-species, through *Hyracodon* Tomes, 1863, *non* Leidy, 1856, *Hyracodon fuliginosus* Tomes, 1863;

(b) *Palaeotheres* Ameghino, 1887 (gender, masculine), type-species, by subsequent designation by Clemens and Marshall, 1976, *Palaeotheres aratae* Ameghino, 1887;

(c) *Abderites* Ameghino, 1887 (gender, masculine), type-species, by original designation, *Abderites meridionalis* Ameghino, 1887;

(d) *Garzonía* Ameghino, 1891 (gender, feminine), type-species, under Article 68b, *Garzonía typica* Ameghino, 1891 (currently treated as junior subjective synonym of *Stilotherium* Ameghino, 1887);

(e) *Decastis* Ameghino, 1891 (gender, feminine), type-species, by original designation, *Decastis columnaris* Ameghino, 1891 (currently treated as a junior subjective synonym of *Dipilus* Ameghino, 1890);

(4) to place the following specific names on the Official List of Specific Names in Zoology:

(a) *fuliginosus* Tomes, 1863, as published in the binomen *Hyracodon fuliginosus* (specific name of type-species of *Caenolestes* Thomas, 1895);

(b) *aratae* Ameghino, 1887, as published in the binomen *Palaeotheres aratae* (specific name of type-species of *Palaeotheres* Ameghino, 1887);

(c) *meridionalis* Ameghino, 1887, as published in the binomen *Abderites meridionalis* (specific name of type-species of *Abderites* Ameghino, 1887);

- (d) *typica* Ameghino, 1891, as published in the binomen *Garzonía typica* (specific name of type-species of *Garzonía* Ameghino, 1891);
- (e) *columnaris* Ameghino, 1891, as published in the binomen *Decastis columnaris* (specific name of type-species of *Decastis* Ameghino, 1891).

LITERATURE CITED

- AMEGHINO, F., 1887. Enumeración sistemática de las especies de mamíferos fósiles coleccionados por Carlos Ameghino en los terrenos eocenos de la Patagonia austral y depositados en el Museo La Plata. *Bol. Mus. de La Plata*, vol. 1:1–26.
- 1889. Contribución al conocimiento de los mamíferos fósiles de la República Argentina, obra escrita bajo los auspicios de la Academia Nacional de Ciencias de la República Argentina para presentarla a la Exposición Universal de París de 1889. *Actas Acad. Cienc. Córdoba*, vol. VI, xxxiii + 1027 pp.; atlas 98 pls.
- 1890. Los plagiaulacideos argentinos y sus relaciones zoológicas, geológicas, y geográficas. *Bol. Inst. geog. argentino*, vol. 11: 143–201.
- 1891. Nuevos restos de mamíferos fósiles descubiertos por Carlos Ameghino en el Eoceno inferior de la Patagonia austral. Especies nuevas, adiciones y correcciones. *Rev. Arg. Hist. Nat.*, vol. 1: 289–328.
- 1893. Les premiers mammifères. Relations entre les mammifères diprotodontes éocènes de l'Amérique du Nord et ceux de la République Argentine. *Rev. gén. Sci.* (Paris), vol. 4: 77–81.
- 1903. Los diprotodontes del orden de los plagiaulacoideos y el origen de los roedores y de los polimastodontes. *An. Mus. nac. Buenos Aires*, (3) vol. 2: 81–192.
- 1906. Les formations sédimentaires du Crétacé supérieur et du tertiaire de Patagonie. *An. Mus. nac. Buenos Aires*, (3) vol. 8: 1–568.
- CLEMENS, W. A., and L. G. MARSHALL., 1976. *Fossilium Catalogus: American and European Marsupialia*. W. Junk (The Hague), Pars 123: 1–114.
- DOERING, A., 1882. *Informe oficial de la Comisión científica agregada al Estado Mayor General de la Expedición al Río Negro (Patagonia) realizada en los meses de Abril, Mayo y Junio de 1879, bajo las órdenes del General D. Julio A. Roca*. III. Geología. 4^o, Buenos Aires.
- D'ORBIGNY, A. D., 1850. *Prodrome de Paléontologie Stratigraphique Universelle des Animaux Mollusques & Rayonnés*. Victor Masson, Paris. Vol. 1.
- LEIDY, J., 1856. Notices of several genera of extinct Mammalia, previously less perfectly characterized. *Proc. Acad. Nat. Sci. Phila.*, vol. 8: 91–92.
- MARSHALL, L. G., 1976. Revision of the South American fossil marsupial subfamily Abderitinae. *Mar del Plata Mus. Munic. Cienc. Natur., Publ.*, vol. 2(3): 57–90.
- MORENO, F.P., 1882. Patagonia. Resto de un antiguo continente hoy sumergido. *An. Soc. Cien. Argentina*, vol. 14: 97–131.
- OSBORN, H.F., 1910. *The Age of Mammals in Europe, Asia, and North America*. New York, MacMillan Co., xx + 635 pp.

- OSGOOD, W.H., 1921. A monographic study of the American marsupial *Caenolestes*. *Publ. Field Mus. Nat. Hist., Zool. Ser.*, vol. 14(1): 1-162.
- PALMER, T.S., 1904. Index Generum Mammalium: a list of the genera and families of mammals. *U.S. Dept. Agr., North American Fauna*, no. 23, 984 pp.
- PASCUAL, R., and H.E. HERRERA., 1973. Adiciones al conocimiento de *Pliolestes tripotamicus* Reig, 1955 (Mammalia, Marsupialia, Caenolestidae) del Plioceno superior de la Argentina. *Ameghiniana*, vol. 10(1): 36-50.
- PIVETEAU, J., 1961. Marsupialia, pp. 585-637. In, J. Piveteau (ed.), *Traité de Paléontologie*, vol. 6, no. 1.
- REIG, O.A., 1955. Un nuevo género y especie de cenolestinos del Plioceno de la Provincia de Buenos Aires (Republica Argentina). *Rev. Asoc. Geol. Argent.*, vol. 10: 60-71.
- SCOTT, W.B., 1937. *A History of Land Mammals in the Western Hemisphere*. Revised edition, rewritten throughout. New York, The MacMillan Co., xiv + 786 pp.
- SIMPSON, G.G., 1930. Post-Mesozoic Marsupialia. In, *Fossilium Catalogus. I: Animalia*. Berlin, W. Junk (The Hague), Pt. 47: 1-87.
- 1945. The Principles of Classification and a Classification of Mammals. *Bull. Amer. Mus. Nat. Hist.*, vol. 85: 1-350.
- 1970. The Argyrolagidae, extinct South American Marsupials. *Bull. Mus. Comp. Zool.*, vol. 139: 1-86.
- SINCLAIR, W.J., 1906. Mammalia of the Santa Cruz beds: Marsupialia. *Rept. Princeton Univ. Exped. Patagonia*, vol. 4(3): 333-460.
- STOLL, N.R., et al., 1961, 1964. *International Code of Zoological Nomenclature adopted by the XV International Congress of Zoology*. London, International Trust for Zoological Nomenclature.
- THOMAS, O., 1895. Description of four small mammals from South America, including one belonging to the peculiar marsupial genus "*Hyracodon*" Tomes. *Ann. Mag. nat. Hist.* (6) vol. 16: 367 [No. 95, November, 1895; see also On *Caenolestes*, a still existing survivor of the Epanorthidae of Ameghino. *Proc. Zool. Soc. London*, for 1895: 870-878.]
- TOMES, R.F., 1863. Notice of a new American form of Marsupial. *Proc. Zool. Soc. London*, for 1863: 50-51.
- TROUESSART, E. L., 1898. *Catalogus Mammalium tam viventium quam fossilium*. New ed., Berlin. Vol. 2, Pt. 5, pp. 665-1264.
- 1904. *Catalogus Mammalium tam viventium quam fossilium*. Quinquinale supplementum, Berlin. 2 vols., 1-546 (1904), 547-929 (1905).
- WINGE, H., 1923. *Pattedyr-Slaegter*. I, Monotremata, Marsupialia, Insectivora, Chiroptera, Edentata. Copenhagen, viii + 360 pp., 111 pls. [English translation: "*The Interrelationships of the Mammalian Genera*". Copenhagen, 3 vols. (1941-42), Transl. by E. Deichmann and G.M. Allen].
- ZITTEL, K.A. VON, 1925. *Text-Book of Paleontology*. London, MacMillan and Co., Vol. III.